Manitoba Agriculture

FARM PLANNING GUIDE
1990 CROP ESTIMATES

Information Update

DATE: January, 1990

The projected crop costs enclosed in these two budgets have been prepared to assist you in developing your own production costs. The budgets assume continuous cropping.

The cash cost inputs associated with growing a crop in Manitoba are substantial. It is extremely important for a farm manager to do detailed calculations if he is to select the optimum crop combination that will maximize profits. Detailed planning is also necessary when estimating the amount of operating credit required to finance the inputs. The importance of good financial management can be emphasized by noting that a 400 hectare (1000 acre) farm requires somewhere in the vicinity of $85,000 for cash inputs alone.

The following budgets are estimates of the cost of producing several different crops in 1990. General departmental recommendations are assumed in using fertilizers and chemical inputs. The figures provide an economic evaluation of the crops and estimate the yields required to cover all costs plus give a return to labor, management and investment. To estimate a cash flow budget the actual payments on principal and interest may be substituted for the fixed costs. As well, an estimate has to be made of family living costs, funds required for capital purchases and a cost analysis of livestock enterprises on the farm especially if your farm is not a straight grain farm.

These budgets may be adjusted by putting in your own figures. As a producer you are encouraged to calculate your own costs of production for various crops. On each farm, costs and yields differ due to soil type, climatic conditions, and agronomic practices. For example, fertilizer requirements may vary considerably on your farm in 1990 because of drought conditions in 1989

MG-15396

CROP PRODUCTION COSTS 1990

	Wheat	*Barley	Canola	Flax	Rye
OPERATING COSTS:	$	$	$	$	$
1) Seed & Treatment	18.48	16.20	18.29	20.70	12.64
2) Fertilizer	47.65	47.65	51.42	23.45	39.40
3) Chemicals	43.24	38.30	32.12	43.24	6.18
4) Fuel	22.24	22.24	22.24	22.24	22.24
5) Machinery Operating Costs	21.00	21.00	21.00	21.00	21.00
6) Insurance	21.50	15.94	32.25	22.98	18.04
7) Other Costs	17.30	17.30	17.30	17.30	17.30
8) Land Taxes	12.36	12.36	12.36	12.36	12.36
9) Drying Costs	0.00	0.00	0.00	0.00	0.00
10) Interest on Operating	14.26	13.37	14.49	12.83	10.44
TOTAL OPERATING COSTS	218.03	204.36	221.47	196.10	159.60
FIXED COSTS:					
11) Land Investment Costs	85.25	85.25	85.25	85.25	85.25
12) Machinery Depreciation	24.71	24.71	24.71	24.71	24.71
13) Machinery Investment Cost	24.71	24.71	24.71	24.71	24.71
14) Storage Costs	7.88	7.88	7.88	7.88	7.88
15) Labor and Management	40.77	40.77	40.77	40.77	40.77
TOTAL FIXED COSTS	183.32	183.32	183.32	183.32	183.32
TOTAL OPERATING & FIXED COSTS	401.35	387.68	404.79	379.42	342.92
			BREAKEVEN ANALYSIS		
Price/Unit	$156/t	$92/t	$265/t	$276/t	$89/t
Breakeven Yield for Operating Costs	1.398 t	2.221 t	836 kg	711 kg	1.793 t
Breakeven Yield for Total Costs	2.573 t	4.214 t	1.528 t	1.375 t	3.853 t

* To calculate the cost for growing oats, use the "barley" column and reduce the chemical cost by approximately $7.42. All other costs remain similar to barley. Oats cannot be grown in a field where avadex was applied in the previous year. Herbicides cannot be used in oats to control wild oats.

GUIDELINES (DOLLARS PER HECTARE)

Corn	Sunflowers	Peas	Lentils	Buckwheat	My Farm
$	$	$	$	$	
42.65	34.72	73.92	36.85	29.70	_____
83.16	58.76	42.87	42.87	56.75	_____
54.36	32.12	37.06	46.95	0.00	_____
24.71	23.47	23.47	22.24	22.24	_____
25.95	23.47	22.24	22.24	21.00	_____
33.98	30.02	26.19	34.35	47.44	_____
18.53	18.53	18.53	17.30	17.30	
16.06	12.36	16.06	12.36	12.36	_____
39.54	14.83	0.00	0.00	0.00	_____
23.73	17.38	18.22	16.46	14.48	_____
362.67	265.66	278.56	251.62	221.27	_____
128.25	85.25	128.25	85.25	85.25	_____
32.12	27.18	25.95	25.95	24.71	_____
32.12	27.18	25.95	25.95	24.71	_____
15.77	7.88	7.88	7.88	7.88	_____
40.77	40.77	40.77	40.77	40.77	_____
249.03	188.26	228.80	185.80	183.32	_____
611.70	453.92	507.36	437.42	404.59	_____

PER HECTARE YIELDS

$118/t	$243/t	$175/t	$375/t	$356/t	_____
3.073 t	1.093 t	1.592 t	671 kg	622 kg	_____
5.184 t	1.868 t	2.899 t	1.166 t	1.136 t	_____

CROP PRODUCTION COSTS 1990

	Wheat	*Barley	Canola	Flax	Rye
OPERATING COSTS:	$	$	$	$	$
1) Seed & Treatment	7.50	6.38	7.90	8.40	5.00
2) Fertilizer	19.45	19.45	20.95	9.60	16.20
3) Chemicals	17.50	15.50	13.00	17.50	2.50
4) Fuel	9.00	9.00	9.00	9.00	9.00
5) Machinery Operating Costs	8.50	8.50	8.50	8.50	8.50
6) Crop Insurance	8.70	6.45	13.05	9.30	7.30
7) Other Costs	7.00	7.00	7.00	7.00	7.00
8) Land Taxes	5.00	5.00	5.00	5.00	5.00
9) Drying Costs	0.00	0.00	0.00	0.00	0.00
10) Interest on Operating	5.79	5.41	5.91	5.20	4.24
TOTAL OPERATING COSTS	88.44	82.69	90.31	79.50	64.74
FIXED COSTS:					
11) Land Investment Costs	34.50	34.50	34.50	34.50	34.50
12) Machinery Depreciation	10.00	10.00	10.00	10.00	10.00
13) Machinery Investment Cost	10.00	10.00	10.00	10.00	10.00
14) Storage Costs	3.19	3.19	3.19	3.19	3.19
15) Labor and Management	16.50	16.50	16.50	16.50	16.50
TOTAL FIXED	74.19	74.19	74.19	74.19	74.19
TOTAL COST	162.63	156.88	164.50	153.69	138.93

BREAKEVEN ANALYSIS

Price/Unit (or per Per Tonne Equivalent)	$4.25/bu $156.00/t	$2.00/bu $ 92.00/t	$6.00/bu $265.00/t	$7.00/bu $276.00/t	$2.25/bu $89.00/t
Breakeven Yield for Operating Costs	20.8 bu	41.3 bu	15.1 bu	11.4 bu	28.8 bu
Breakeven Yield for Total Costs	38.3 bu	78.4 bu	27.4 bu	22.0 bu	61.7 bu

* To calculate the cost for growing oats, use the "barley" column and reduce the chemical cost by approximately $3.00. All other costs remain similar to barley. Oats cannot be grown in a field where avadex was applied in the previous year. Hergicides cannot be used in oats to control wild oats.

GUIDELINES (DOLLARS PER ACRE)

Corn	Sunflowers	Peas	Lentils	Buckwheat	My Farm
$	$	$	$	$	
23.00	13.50	30.00	15.00	12.00	_____
33.70	24.05	17.30	17.30	22.95	_____
22.00	13.00	15.00	19.00	0.00	_____
10.00	9.50	9.50	9.00	9.00	_____
10.50	9.50	9.00	9.00	8.50	_____
13.75	12.15	10.60	13.90	19.20	_____
7.50	7.50	7.50	7.00	7.00	_____
6.50	5.00	6.50	5.00	5.00	_____
16.00	6.00	0.00	0.00	0.00	_____
10.01	7.01	7.38	6.66	5.86	_____
152.96	107.21	112.78	101.86	89.51	_____
51.90	34.50	51.90	34.50	34.50	_____
13.00	11.00	10.50	10.50	10.00	_____
13.00	11.00	10.50	10.50	10.00	_____
6.38	3.19	3.19	3.19	3.19	_____
16.50	16.50	16.50	16.50	16.50	_____
100.78	76.19	92.59	75.19	74.19	_____
253.74	183.40	205.37	177.05	163.70	_____

PER ACRE YIELDS

$3.00/bu. $118.00/t	$0.11/lb. $243.00/t	$4.75/bu. $175.00/t	$0.17/lb $375.00/t	$7.75/bu $356.00/t	_____ _____
51.0 bu.	975 lb.	23.7 bu.	599 lb.	11.5 bu.	_____
84.6 bu.	1667 lb.	43.2 bu.	1041 lb.	21.1 bu.	_____

CROP BUDGET ASSUMPTIONS

1) Seed & Treatment

Per Hectare

	Crop	Rate/ha	Price/Unit	Cost/ha
**	Wheat	84 kg	$ 0.22/kg	$18.48
**	Barley	81 kg	$ 0.20/kg	$16.20
*	Canola	7 kg	$ 0.88/kg	$ 6.16
	Flaxseed	45 kg	$ 0.46/kg	$20.70
	Rye	79 kg	$ 0.16/kg	$12.64
	Corn	56,865 plants	$80.00/80,000	$42.65
	Sunflowers	7 kg	$ 4.96/kg	$34.72
	Peas	168 kg	$ 0.44/kg	$73.92
	Lentils	67 kg	$ 0.55/kg	$36.85
	Buckwheat	54 kg	$ 0.55/kg	$29.70

* Canola Seed treatment cost is an additional cost: $12.13/hectare.

** Seed treatment cost is included in seed cost at $4.95/hectare.

Per Acre

	Crop	Rate/acre	Price/Unit	Cost/ac
**	Wheat	1.25 bu.	$ 6.00/bu.	$ 7.50
**	Barley	1.5 bu.	$ 4.25/bu.	$ 6.38
*	Canola	6 lbs.	$ 0.40/lb.	$ 2.40
	Flaxseed	40 lbs.	$ 0.21/lb.	$ 8.40
	Rye	1.25 bu.	$ 4.00/bu.	$ 5.00
	Corn	23,000 plants	$80.00/80,000	$23.00
	Sunflowers	6 lbs.	$ 2.25/lb.	$13.50
	Peas	2.5 bu.	$12.00/bu.	$30.00
	Lentils	60 lbs.	$ 0.25/lb.	$15.00
	Buckwheat	1 bu.	$12.00/bu.	$12.00

* Canola Seed treatment cost is an additional cost: $5.50/acre.

** Seed treatment cost is included in seed cost at $2.00/acre.

2) Fertilizer Price/kg

	Nitrogen 35¢	$	Phosphorous 55¢	$	Potash 40¢	$	Sulfur 46¢	$	Cost/ ha($)
	Per Hectare								
Crop:	kg	Cost	kg	Cost	kg	Cost	kg	Cost	Cost
Wheat	78	27.30	37	20.35	0	0.00	0	0.00	47.65
Barley	78	27.30	37	20.35	0	0.00	0	0.00	47.65
Canola	90	31.50	22	12.10	0	0.00	17	7.82	51.42
Flaxseed	67	23.45	0	0.00	0	0.00	0	0.00	23.45
Rye	78	27.30	22	12.10	0	0.00	0	0.00	39.40
Corn	101	35.35	45	24.75	45	18.00	11	5.06	83.16
Sunflowers	67	23.45	39	21.45	22	8.80	11	5.06	58.76
Peas	0	0.00	39	21.45	34	13.60	17	7.82	42.87
Lentils	0	0.00	39	21.45	34	13.60	17	7.82	42.87
Buckwheat	62	21.70	39	21.45	34	13.60	0	0.00	56.75

2) Fertilizer Price/lb

	Nitrogen 16¢	$	Phosphorous 25¢	$	Potash 18¢	$	Sulfur 21¢	$	Cost/ acre($)
	Per Acre								
Crop:	lbs.	Cost	lbs.	Cost	lbs.	Cost	lbs.	Cost	Cost
Wheat	70	11.20	33	8.25	0	0.00	0	0.00	19.45
Barley	70	11.20	33	8.25	0	0.00	0	0.00	19.45
Canola	80	12.80	20	5.00	0	0.00	15	3.15	20.95
Flaxseed	60	9.60	0	0.00	0	0.00	0	0.00	9.60
Rye	70	11.20	20	5.00	0	0.00	0	0.00	16.20
Corn	90	14.40	40	10.00	40	7.20	10	2.10	33.70
Sunflowers	60	9.60	35	8.75	20	3.60	10	2.10	24.05
Peas	0	0.00	35	8.75	30	5.40	15	3.15	17.30
Lentils	0	0.00	35	8.75	30	5.40	15	3.15	17.30
Buckwheat	55	8.80	35	8.75	30	5.40	0	0.00	22.95

Note: Fertilizer rates as recommended by the University of Manitoba under normal climatic conditions.

Fertilizer requirements for 1990 may be less in the 1989 drought areas of the Province.

3) Chemicals:

PER HECTARE

CROP	PRE-EMERGENCE HERBICIDES $/Ha	POST-EMERGENCE BROADLEAF HERBICIDES $/Ha	WILD OATS MILLET HERBICIDES $/Ha	INSECTICIDES FUNGICIDES $/Ha	TOTAL COST/Ha $
Wheat	0.00	11.12	32.12	0.00	43.24
Barley	0.00	6.18	32.12	0.00	38.30
Canola(1)	0.00	0.00	32.12	0.00	32.12
Flaxseed	0.00	11.12	32.12	0.00	43.24
Rye	0.00	6.18	0.00	0.00	6.18
Corn(2)(3)	0.00	8.65	45.71	0.00	54.36
Sunflowers	0.00	0.00	32.12	0.00	32.12
Peas	0.00	4.94	32.12	0.00	37.06
Lentils	0.00	14.83	32.12	0.00	46.95
Buckwheat	0.00	0.00	0.00	0.00	0.00

(1) Fungicide Treatment $54.34 Not In The Budget.
(2) Pre-Emergence part band $29.64 Not In The Budget.
(3) Corn Borer Treatment $24.25 Not In The Budget.

PER ACRE

CROP	PRE-EMERGENCE HERBICIDES $/Ac	POST-EMERGENCE BROADLEAF HERBICIDES $/Ac	WILD OATS MILLET HERBICIDES $/Ac	INSECTICIDES FUNGICIDES $/Ac	TOTAL COST/AC $
Wheat	0.00	4.50	13.00	0.00	17.50
Barley	0.00	2.50	13.00	0.00	15.50
Canola(1)	0.00	0.00	13.00	0.00	13.00
Flaxseed	0.00	4.50	13.00	0.00	17.50
Rye	0.00	2.50	0.00	0.00	2.50
Corn(2)(3)	0.00	3.50	18.50	0.00	22.00
Sunflowers	0.00	0.00	13.00	0.00	13.00
Peas	0.00	2.00	13.00	0.00	15.00
Lentils	0.00	6.00	13.00	0.00	19.00
Buckwheat	0.00	0.00	13.00	0.00	0.00

(1) Fungicide Treatment $22.00 Not In The Budget.
(2) Pre-Emergence part band $12.00 Not In The Budget.
(3) Corn Borer Treatment $11.00 Not In The Budget.

4) Fuel Costs:

Includes fuel used for field work, trucking inputs in and product out, and travel for farm business purposes.

5) Machinery & Operating Costs:

Includes costs for maintenance, repairs, licences and insurance.

6) Crop Insurance: (1989 rates) - 1990 rates had not been released at the time of publication

Risk Area #6 at the average coverage dollar rate on a "B" soil zone plus hail spot loss and additional hail insurance at $100/acre coverage for wheat, barley, canola, flax and rye.

Risk Area #11 at the high coverage dollar rate on a "B" soil zone plus hail spot loss and additional insurance, at $100/acre coverage for sunflowers, peas, lentils, buckwheat, beans and Corn Area A.

7) Other Costs:

Includes overhead expenses - hydro, telephone, accounting, building and machinery insurance, etc.

8) Land Taxes

The average for the province was based on land tax assessment and mill rates of a sample of municipalities growing crops less provincial tax rebate. Budget assumes $12.36/ha ($5.00/acre) except for corn and peas which are normally grown on higher productive land where land taxes are estimated at $16.06/ha ($6.50/acre).

9) Drying Costs:

Budget allocates costs only for corn and sunflowers. However, drying costs may be incurred in some years for other crops.

10) Interest On Operating

Interest charges on operating costs are calculated at 14% for six months.

11) Land Investment Cost:

Land values are based on the three-year average land sale values in Manitoba; except for corn and peas where the average land sale values were those reported in crop District #8. Assumed 10% return on land investment.

12) Depreciation:

Assumed 10% depreciation, no salvage value.

13) Investment Cost:

10% opportunity cost on the machinery investment per hectare or acre by crop.

PER HECTARE

Crop	Land Investment Per Ha($)	Land Investment Cost($)	Machinery Investment Per Ha($)	Machinery Depreciation Cost($)	Machinery Investment Cost($)
Wheat	853.00*	85.25	247.10	24.71	24.71
Barley	853.00*	85.25	247.10	24.71	24.71
Canola	853.00*	85.25	247.10	24.71	24.71
Flaxseed	853.00*	85.25	247.10	24.71	24.71
Rye	853.00*	85.25	247.10	24.71	24.71
Corn	1,282.00**	128.25	321.23	32.12	32.12
Sunflowers	853.00*	85.25	271.81	27.18	27.18
Peas	1,282.00**	128.25	259.46	25.95	25.95
Lentils	853.00*	85.25	259.46	25.95	25.95
Buckwheat	853.00*	85.25	247.10	24.71	24.71

PER ACRE

Crop	Land Investment Per Acre($)	Land Investment Cost($)	Machinery Investment Per Acre($)	Machinery Depreciation Cost($)	Machinery Investment Cost($)
Wheat	345.00*	34.50	100.00	10.00	10.00
Barley	345.00*	34.50	100.00	10.00	10.00
Canola	345.00*	34.50	100.00	10.00	10.00
Flaxseed	345.00*	34.50	100.00	10.00	10.00
Rye	345.00*	34.50	100.00	10.00	10.00
Corn	519.00**	51.90	130.00	13.00	13.00
Sunflowers	345.00*	34.50	110.00	11.00	11.00
Peas	519.00**	51.90	105.00	10.50	10.50
Lentils	345.00*	34.50	105.00	10.50	10.50
Buckwheat	345.00*	34.50	100.00	10.00	10.00

* Based on the three years average land value for the province.
** Based on the three years average land value for crop district 8.

13) Storage:

Assumed a 5% depreciation cost and 10% investment cost.

Farm storage requirements were assumed to be 30 bushels/acre costing $1/bushel for 75% of the storage and $1.25/bushel for 25% aerated storage.

Storage requirements for corn were calculated at 60 bushels/acre.

Example - Wheat

Depreciation	$\frac{\$30 - \$3}{20 \text{ years}}$	=	$1.35
Investment	$\frac{\$30 + \$3}{2}$ X 10%	=	$1.65
	sub-total		$3.00 X 75% = $2.25

Aeration Bins (1/4)

Depreciation	$\frac{\$37.50 - \$3.75}{20 \text{ years}}$	=	$1.69
Investment	$\frac{\$37.50 + \$3.75}{2}$ x 10%	=	$2.06
	sub-total		$3.75 X 25% = $0.94
		TOTAL	$3.19

14) Labor & Management

It depends upon the individual farm size, type of enterprises, and labor requirements.

Assumed cost - $40.77 per hectare ($16.50/acre).

This estimate could be equated to paid wages plus personal and family withdrawals from the farm business.

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FOR FURTHER INFORMATION SEE YOUR LOCAL MANITOBA AGRICULTURE OFFICE.